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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

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ANSWER

Arizona Corporation Commission

DOCKETED

JAN 22 2014

DOCKETED BY

ALVIN S. RATLIFF; JOHN HART; DAN
 TINGLE; DAN WHITE; DARREN DUNLAP; ED
 CURRY; EFRAIN ALVAREZ; FRED ZAMORA;
 JOE TULLY; JUSTIN HASS; LANCE OWEN;
 MONTE ALLEN; NATHAN ZUCK; PAUL
 WHITE; RANDY HASS; TALBOTT
 STARLINGS,

Complainants,

SULPHUR SPRINGS VALLEY ELECTRIC
 COOPERATIVE, INC.,

Respondent.

BROWNSTEIN HYATT FARBER SCHRECK, LLP

One East Washington Street, Suite 2400
 Phoenix, AZ 85004
 602.382.4040

Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Cooperative") hereby files its answer to the formal complaint ("Formal Complaint") filed by Alvin S. Ratliff, *et al.* (collectively, the "Complainants") on December 17, 2013. By stipulation, the Complainants and SSVEC agreed that the Cooperative's answer would be filed on or before January 22, 2014.

INTRODUCTION AND BACKGROUND

SSVEC is a member-owned, non-profit cooperative and public service corporation which provides electric distribution service to approximately 51,000 metered customers in parts of Cochise, Graham, Pima and Santa Cruz Counties, Arizona. SSVEC began installing Automated Meter Reading ("AMR") equipment in 2002 to lower its cost of operations. The AMR meters worked well and by the end of 2011, SSVEC had replaced all manual-read meters.

Beginning in the summer of 2011, SSVEC noticed some minor loss of communications with the AMR meters in rural areas. When SSVEC loses communication with an AMR meter, it must be read manually by an employee dispatched to the location of the meter, which is costly to the Cooperative and its member-owners.

1 In 2012, the communications losses increased and the Cooperative found that the problem
2 worsened in the summer and appeared to be related to circuits where irrigation customers were
3 using variable frequency drives (“VFDs”) on their pump motors. A VFD is a type of motor
4 controller that drives an electric motor by varying the frequency supplied to the electric motor.
5 VFDs offer various benefits including energy savings, better motor control, and reduced
6 maintenance. However, without proper filtering, VFDs can introduce harmful harmonic noise or
7 distortion to electrical circuits.

8 As more VFDs were installed in 2013, the communications problems with the AMR meters
9 became worse yet. The problem is not isolated to an individual pump meter but causes
10 communications problems with all other meters on the circuit.

11 While investigating the AMR communications problem, SSVEC discovered that many of
12 the VFDs which had been installed on irrigation motors in the past were not compliant with the
13 Cooperative’s Service Conditions tariff, and specifically, with the Institute of Electrical and
14 Electronic Engineers (“IEEE”) Standard 519 which is adopted and incorporated into the tariff. The
15 IEEE Standard 519 sets requirements for harmonics control in electric power systems and places
16 limits on total harmonic distortion (“THD”). Specifically, SSVEC’s tariff states that “[t]he
17 Customer’s load shall not exceed the Power Quality Impact described in IEEE-519, Recommended
18 Practices and Requirements for Harmonic Control in Electric Power Systems.” Additionally, the
19 tariff states that “[t]he Customer shall be responsible to make sure the installation complies with
20 the guidelines set forth in IEEE-519 as measured at the point of common coupling.”

21 In a letter to irrigation customers dated August 15, 2013, SSVEC explained that customers
22 with VFDs that do not comply with the IEEE Standard 519 would need to correct the problem by
23 February 1, 2014. SSVEC has since extended this deadline to April 1, 2014, for those customers
24 who can show that they will achieve compliance by the later date. SSVEC further advised
25 customers that the Cooperative has purchased testing equipment to test for THD and that its
26 technicians would perform THD testing for customers upon request. Additionally, SSVEC
27 advised customers that it has a limited amount of loan funds available at zero interest to assist
28 customers in bringing non-compliant VFDs into compliance.

1 The Complainants are irrigation customers of SSVEC with VFDs that do not meet the
2 applicable IEEE Standard 519. They have asserted that they should not be required to spend the
3 money necessary to bring their VFDs into compliance with the IEEE Standard 519,
4 notwithstanding the fact that they are beneficiaries of lower energy costs that will pay back the
5 cost of a VFD (including necessary filtering) in approximately three and one-half years. Rather,
6 they assert that the cost of making their VFDs compliant with IEEE Standard 519 should be borne
7 by all of the customers of SSVEC.

8 It is entirely appropriate that a customer with a non-compliant VFD should bear the cost of
9 bringing that VFD into compliance with the Cooperative's tariffs. The tariffs are clear that a
10 customer's load shall not exceed the power quality impact described in IEEE Standard 519, and
11 further, that it is the customer's responsibility to make sure that an installation complies with the
12 requirements of IEEE Standard 519 as measured at the point of common coupling. Moreover,
13 equity dictates that the customer with the VFD should incur the costs of compliance because it is
14 the customer who benefits from the energy savings, better motor control and reduced maintenance
15 associated with a VFD.

16 For its answer to the Complainants' Formal Complaint, SSVEC answers and affirmatively
17 pleads as follows:

18 **RESPONSES TO ALLEGATIONS MADE IN THE FORMAL COMPLAINT**

19 1. Answering Paragraph 1, SSVEC admits that each one of the Complainants: (i) are
20 farmers doing business within the Cooperative's service boundaries; and (ii) are customers of
21 SSVEC. SSVEC is without knowledge or information sufficient to form a belief as to the truth of
22 the remaining allegations in Paragraph 1 and, therefore, denies such allegations.

23 2. Answering Paragraph 2, SSVEC admits that it is a public service corporation with
24 its principal place of business located at 350 N. Haskell Avenue, Willcox, Arizona 85643.

25 3. Answering Paragraph 3, SSVEC admits that it is a public service corporation
26 subject to the jurisdiction of the Arizona Corporation Commission ("Commission") pursuant to
27 Article XV of the Arizona Constitution and applicable provisions of Title 40 of the Arizona
28 Revised Statutes, including but not limited to A.R.S. §40-246.

1 4. Answering Paragraph 4, SSVEC admits that it provides electric service to the
2 Complainants.

3 5. Answering Paragraph 5, SSVEC admits that VFDs have the ability to save energy
4 and that all VFDs create some degree of voltage and/or current harmonics on the electric grid.
5 SSVEC further admits that the use of VFDs has increased within its service area which has
6 increased voltage and/or current harmonics on the Cooperative's distribution grid and at
7 substations. SSVEC further admits that controlling and/or mitigating voltage and/or current
8 harmonics on its system is of paramount importance to the Cooperative. SSVEC is without
9 knowledge or information sufficient to form a belief as to the truth of the remaining allegations in
10 Paragraph 5 and, therefore, denies such allegations.

11 6. Answering Paragraph 6, SSVEC admits that it provides electric service to
12 customers in its service area who are irrigators (including the Complainants named in the
13 Complaint), municipal water suppliers, operators of mines, and owners and/or operators of
14 domestic water wells. SSVEC further admits that it is presently aware of 116 VFDs in use within
15 its service area, 103 of which are used for agricultural irrigation purposes. SSVEC has not verified
16 the total number of VFDs used by municipal water providers or operators of mines within its
17 service area, nor has the Cooperative verified the number of VFDs or single-to-three-phase
18 converters used by customers with domestic water wells. SSVEC admits that the number of
19 customers installing VFDs has increased in recent years and continues to increase. SSVEC is
20 without knowledge or information sufficient to form a belief as to the truth of the remaining
21 allegations in Paragraph 6 and, therefore, denies such allegations.

22 7. Answering Paragraph 7, SSVEC denies that it has "directives" pertaining to the
23 installation of VFDs and further denies that it "pushes" customers to install VFDs or any other
24 energy-saving device. SSVEC admits that it supports and encourages energy efficiency measures
25 including the installation of VFDs. SSVEC further admits that it has offered zero-interest loans to
26 customers for the cost of purchasing and installing VFDs and other energy-saving devices as part
27 of the Cooperative's Demand Side Management/Energy Efficiency Program ("DSM/EE Program")
28 approved by the Commission. SSVEC is without knowledge or information sufficient to form a

1 belief as to the truth of the remaining allegations in Paragraph 7 and, therefore, denies such
2 allegations.

3 8. Answering Paragraph 8, SSVEC denies that it directed, demanded, required,
4 requested or otherwise applied pressure upon the Complainants to install VFDs, and asserts that
5 the decision to install (or not install) a VFD was made solely by each individual Complainant
6 based upon a variety of considerations including the future energy cost savings attributable to the
7 installation of a VFD, zero-interest loans available under the Cooperative's DSM/EE Program, and
8 the length of the payback on the capital improvement. SSVEC further denies that it authorized or
9 approved specific installations of VFDs by the Complainants. SSVEC admits that of 49 VFDs
10 installed by Complainants, five loan applications for individual VFDs were submitted to and
11 processed by the Cooperative for zero-interest financing under the Cooperative's DSM/EE
12 Program. SSVEC denies that its processing of a loan request for a VFD constitutes an approval or
13 admission that the installation of the VFD (including a DC Link Choke or any device intended to
14 mitigate voltage and/or current harmonics) complies with the Cooperative's Service Conditions, its
15 Service Entrance Specifications for Residential and Commercial, or the applicable IEEE Standard
16 519. SSVEC is without knowledge or information sufficient to form a belief as to the truth of the
17 remaining allegations in Paragraph 8 and, therefore, denies such allegations.

18 9. Answering Paragraph 9, SSVEC denies the allegations contained in this paragraph.

19 10. Answering Paragraph 10, SSVEC is without knowledge or information sufficient to
20 form a belief as to the truth of the allegations in this paragraph and, therefore, denies such
21 allegations.

22 11. Answering Paragraph 11, SSVEC asserts that its Service Conditions tariff speaks
23 for itself and is the best evidence of its contents. SSVEC denies that the Service Conditions tariff
24 provides a party installing a VFD two options regarding harmonic currents. SSVEC asserts that
25 under all conditions and circumstances, a customer's load may not exceed the power quality
26 impact described in IEEE Standard 519. SSVEC further asserts that it is the customer's
27 responsibility to make sure that its installation of a VFD complies with the requirements of IEEE
28 Standard 519 as measured at the point of common coupling.

1 12. Answering Paragraph 12, SSVEC asserts that its Service Conditions tariff speaks
2 for itself and is the best evidence of its contents. SSVEC denies that installing one of the devices
3 listed in Section 5 of its Service Conditions tariff satisfies the Complainants' obligations relating
4 to mitigating voltage and/or current harmonics.

5 13. Answering Paragraph 13, SSVEC denies that performing the calculations and tasks
6 necessary to verify compliance with IEEE Standard 519 is complicated. SSVEC asserts that its
7 Service Conditions tariff speaks for itself and is the best evidence of its contents. SSVEC further
8 asserts that under all conditions and circumstances, a customer's load may not exceed the power
9 quality impact described in IEEE Standard 519. SSVEC further asserts that it is the customer's
10 responsibility to make sure that its installation of a VFD complies with the requirements of IEEE
11 Standard 519 as measured at the point of common coupling. SSVEC is without knowledge or
12 information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 13
13 and, therefore, denies such allegations.

14 14. Answering Paragraph 14, SSVEC denies the allegations of this paragraph.

15 15. Answering Paragraph 15, SSVEC admits that it began installing automated meter
16 reading equipment in 2002 to lower the cost of its operations. SSVEC admits that it has made
17 minor upgrades to the AMR equipment in some of its substations in recent years.

18 16. Answering Paragraph 16, SSVEC admits that it sent a letter dated August 15, 2013,
19 to its irrigation customers, a copy of which is attached to the Formal Complaint as Exhibit 1.
20 SSVEC asserts that the letter speaks for itself and is the best evidence of its contents.

21 17. Answering Paragraph 17, SSVEC admits that its current Standard Offer Tariff was
22 approved in 2009. SSVEC asserts that the Standard Offer Tariff speaks for itself and is the best
23 evidence of its contents. SSVEC denies all other allegations of Paragraph 17.

24 18. Answering Paragraph 18, SSVEC asserts that the August 15, 2013, letter attached to
25 the Formal Complaint as Exhibit 1 speaks for itself and is the best evidence of its contents.
26 SSVEC further asserts that the Formal Complaint mischaracterizes the Cooperative's Service
27 Conditions tariff and that the tariff speaks for itself and is the best evidence of its contents.
28 SSVEC denies that the August 15, 2013, letter contradicts in any way its Service Conditions tariff.

1 SSVEC further denies that the August 15, 2013, letter constitutes a “back-door unauthorized rate
2 increase.”

3 19. Answering Paragraph 19, SSVEC admits that one way to bring a non-compliant
4 VFD into compliance with IEEE Standard 519 is to install a harmonic filter. SSVEC asserts that
5 another option is to disconnect or bypass a non-compliant VFD and use the pump without VFD
6 control. SSVEC is without knowledge or information sufficient to form a belief as to the truth of
7 the remaining allegations in Paragraph 19 and, therefore, denies such allegations.

8 20. Answering Paragraph 20, SSVEC disagrees with Complainants’ characterization of
9 the requirements of the Service Conditions tariff and asserts that the tariff speaks for itself and is
10 the best evidence of its contents. SSVEC further asserts that under all conditions and
11 circumstances, a customer’s load may not exceed the power quality impact described in IEEE
12 Standard 519. SSVEC further asserts that it is the customer’s responsibility to make sure that its
13 installation of a VFD complies with the requirements of IEEE Standard 519 as measured at the
14 point of common coupling. SSVEC denies that it approved the VFDs installed by the
15 Complainants, the DC Link Chokes, or any other aspect of the installation. SSVEC denies that the
16 Complainants have “fully satisfied their obligations under the Service Conditions regarding VFD
17 harmonics.”

18 21. Answering Paragraph 21, SSVEC denies the allegations of this paragraph.

19 22. Answering Paragraph 22, SSVEC denies that it has specifically targeted irrigators
20 with VFDs for compliance with IEEE Standard 519. SSVEC further denies that it has
21 discriminated against Complainants. SSVEC has, in fact, identified non-irrigation customers with
22 VFDs and has tested some of those installations. Two were determined to be out of compliance
23 with the IEEE Standard 519 and both are in the process of installing appropriate filtering
24 equipment at their expense.

25 23. Answering Paragraph 23, SSVEC admits that its service area includes municipal
26 water suppliers, mining operations, and residential customers with domestic water wells who have
27 installed VFDs. SSVEC is without knowledge or information sufficient to form a belief as to the
28 truth of the remaining allegations in Paragraph 23 and, therefore, denies such allegations.

1 24. Answering Paragraph 24, SSVEC is without knowledge or information sufficient to
2 form a belief as to the truth of the allegations regarding residential customers with domestic water
3 wells who have installed VFDs and single-to-three-phase converters and, therefore, denies such
4 allegations. SSVEC admits that single-to-three-phase converters are subject to the same
5 requirements under the Service Conditions tariff as VFDs regarding voltage and/or current
6 harmonics.

7 25. Answering Paragraph 25, SSVEC is without knowledge or information sufficient to
8 form a belief as to the truth of the allegations in this paragraph and, therefore, denies such
9 allegations.

10 26. Answering Paragraph 26, SSVEC asserts that it is addressing harmonic distortion
11 caused by all large electrical loads including irrigation, business, industrial and municipal sources.
12 SSVEC further asserts that it is in the process of researching and evaluating the impact of smaller
13 sources of harmonic currents such as VFDs on small residential pumps, but no decisions have been
14 made at this time regarding what corrective action if any that will be required for these smaller
15 sources. SSVEC denies that a decision has been made to exempt residential customers with
16 domestic water wells from compliance with the Service Conditions tariff or IEEE Standard 519.
17 SSVEC further denies that it has acted in an arbitrary, unfair or discriminatory manner. SSVEC is
18 without knowledge or information sufficient to form a belief as to the truth of the remaining
19 allegations in Paragraph 26 and, therefore, denies such allegations.

20 27. Answering Paragraph 27, SSVEC asserts that its letter dated August 15, 2013, a
21 copy of which is attached to the Formal Complaint as Exhibit 1, speaks for itself and is the best
22 evidence of its contents.

23 28. Answering Paragraph 28, SSVEC denies that its requirement that the Complainants'
24 VFDs comply with the Service Conditions tariff and IEEE Standard 519 is an unauthorized rate
25 increase. SSVEC asserts that under all conditions and circumstances, a customer's load may not
26 exceed the power quality impact described in IEEE Standard 519. SSVEC further asserts that it is
27 the customer's responsibility to make sure that its installation of a VFD complies with the
28 requirements of IEEE Standard 519 as measured at the point of common coupling.

29. Answering Paragraph 29, SSVEC denies that it has demanded anything of Complainants which violates the Service Conditions tariff. SSVEC asserts that under all conditions and circumstances, a customer's load may not exceed the power quality impact described in IEEE Standard 519. SSVEC further asserts that it is the customer's responsibility to make sure that its installation of a VFD complies with the requirements of IEEE Standard 519 as measured at the point of common coupling. SSVEC denies that Complainants are in full compliance with the Service Conditions tariff.

30. SSVEC denies each and every allegation of the Formal Complaint not specifically admitted herein.

AFFIRMATIVE DEFENSES

1. The Formal Complaint fails to state a claim upon which relief can be granted.

2. SSVEC has not knowingly waived any defenses under Rule 8 and 12, Arizona Rules of Civil Procedure. If additional information is obtained through discovery or investigation which supports one or more affirmative defenses, SSVEC will seek leave to amend this answer to state such affirmative defenses.

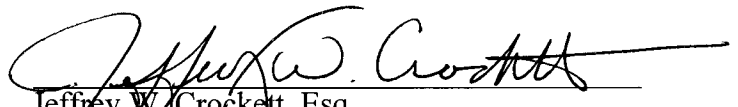
WHEREFORE, SSVEC respectfully requests:

A. That Complainants take nothing by way of their Formal Complaint and that the Formal Complaint be dismissed with prejudice; and

B. For such other relief as this Commission deems appropriate.

RESPECTFULLY submitted this 22nd day of January, 2014.

BROWNSTEIN HYATT FARBER SCHRECK LLP


Jeffrey W. Crockett, Esq.
One East Washington Street, Suite 2400
Phoenix, Arizona 85004
Attorneys for Sulphur Springs Valley Electric
Cooperative, Inc.

1 ORIGINAL and thirteen (13) copies filed
2 this 22nd day of January, 2014, with:

3 Docket Control
4 ARIZONA CORPORATION COMMISSION
5 1200 West Washington Street
6 Phoenix, Arizona 85007

7 COPY of the foregoing hand-delivered
8 this 22nd day of January, 2014, to:

9 Lyn Farmer, Chief Administrative Law Judge
10 Hearing Division
11 ARIZONA CORPORATION COMMISSION
12 1200 West Washington Street
13 Phoenix, Arizona 85007

14 Janice Alward, Chief Counsel
15 Legal Division
16 ARIZONA CORPORATION COMMISSION
17 1200 West Washington Street
18 Phoenix, Arizona 85007

19 Steve Olea, Director
20 Utilities Division
21 ARIZONA CORPORATION COMMISSION
22 1200 West Washington Street
23 Phoenix, Arizona 85007

24 COPY of the foregoing mailed via first class mail
25 and e-mail this 22nd day of January, 2014, to:

26 Gregory E. Good, Esq.
27 GOOD LAW, P.C.
28 Foothills Corporate Center
3430 E. Sunrise Drive, Suite 270
Tucson, Arizona 85718

29 
30 015442\0008\0922794.1